

IN THE SPECIFICATION:

Please amend paragraph number [0001] as follows:

[0001] This application is a divisional of application Serial No. 10/152,257, filed May 21, 2002, ~~pending,~~ now U.S. Patent 6,736,058, issued May 18, 2004, which is a continuation of application Serial No. 09/650,840, filed August 30, 2000, now U.S. Patent 6,439,115, issued August 27, 2002.

Please amend paragraph number [0007] as follows:

[0007] With respect to the fabrication and operation of field emission displays in particular, typically, a cathode plate having a plurality of individual cathodic electrodes is positioned in a parallel, spaced apart relationship with a transparent display substrate covered by a phosphorous film acting as an anode plate. Borosilicate glass is often selected as a transparent substrate ~~due to it~~ to its having a compatible coefficient of thermal expansion and suitable structural characteristics. The two plates are spaced away from each other by at least one dielectric spacer, ridge, or rail, which borders at least a portion, if not the entire periphery, of what is to be the display area or window. Upon providing electrical potentials of appropriate polarization and magnitude to various electrodes located on the cathode plate, electrons are emitted therefrom and are drawn toward the opposing, but spaced-apart, glass substrate serving as an anode plate whereon images can be viewed through the display window. In order for the opposing cathode plate and the transparent glass substrate/anode plate to function properly, the very small space between the two plates must be uniform and the various thickness of each of the various layers of screen printed material provided on each plate must be controlled within strict dimensional tolerances. Such strict dimensional tolerances are needed, not only for keeping the final FED unit as thin as possible, but are also needed for quality control purposes of the image to be displayed. For example, various qualities of the displayed image, such as overall image uniformity, resolution, and brightness, can be directly influenced by minute, or out of specification, spacing of the two opposing plates.

Please amend paragraph number [0010] as follows:

[0010] Illustrated in drawing FIGS. 1B and 1C hereof is the screen printing process of forming conductive traces 8 and 10 on a portion of a representative substrate, which in the case of an FED serves as an anode plate 16 shown in drawing FIG. 1A. In drawing FIG. 1B, the ridge or spacer 3, comprising vertically stacked dielectric layers 4 and 6, has previously been formed onto substrate 2 by screen printing processes known within the art. A screen printing apparatus 18, including a screen support frame 20 and a flexible screen 22, is biased toward substrate 2 by a squeegee 24. The arrow depicts the direction in which squeegee 24 is moved across the top of screen 22, usually at a constant speed, thereby forcing conductive paste 26 downward through a pattern in screen 22 and onto the exposed surface of substrate 2, thus forming lower-level conductive trace 8. Illustrated in drawing FIG. 1C is the forming of upper-level conductive trace 10 by squeegee 24 ~~biasing~~ flexible screen 22 downward to nearly press against the top of layer 6 while simultaneously moving forward, thereby causing conductive paste 26 to be laid down on the exposed surface of layer 6 through a preformed pattern in screen 22. Note that conductive trace 8 stops short of the proximate edges of dielectric layers 4 and 6 which form elevated ridge or rail 3 so that screen 22 does not unduly contact ridge 3 while forming lower-level conductive trace 8.

Please amend paragraph number [0052] as follows:

[0052] Drawing FIG. 4 depicts a plan view of a yet to be segmented glass substrate 2 comprising a plurality of what will eventually be individual anode plates 44, each having insulative spacers comprised of layers 4 and 6, as well as screen printed conductive traces 42, 42A, and 42B extending from substrate 2 upward onto layer 6 as previously illustrated and described herein. The particular array 46 shown in drawing FIG. 4 is referred to as a 3 x 4 array due to substrate 2 having three rows ~~and 4~~ and four columns of what will eventually be twelve individual anode plates 44. Upon all screen printing operations being performed on substrate 2, including the “uphill” screen printing of conductive traces 42, optional end-most traces 42A, 42B, in accordance with the present invention, and any firing that may be required, substrate 2 is

segmented by scoring or cleaving 48, or any other suitable method for separating substrate 2 into twelve individual anode plates 44. Segmented anode plates 44 will then, in due course, be assembled with respective complementary cathode plates, such as cathode plate 50 illustrated in drawing FIG. 8, thereby providing twelve individual exemplary FED devices. As will now be apparent, smaller or larger arrays of FED devices or other microelectronic devices can be screen printed in accordance with the present invention, limited only by the size of the screen that can be accommodated by the particular screen printing equipment being used and the size of the microelectronic component or components being produced on a given common substrate of suitable material. Thus, it can be appreciated that embodiments of the disclosed screen printing method are particularly suitable for implementation within a variety of production lines used for screen printing of microelectronic devices, including, but not limited to, FED devices.

Please amend paragraph number [0055] as follows:

[0055] In drawing FIG. 6 a representative substrate 2 is shown having a first spacer 70 of a generally rectangular cross-section, and a second smaller additional spacer 72, also of a generally rectangular cross-section. Second spacer 72 is ~~is off-settingly off-settingly~~ positioned on top of first spacer 70 to create a ledge or shelf, which results in spacers 70 and 72 having a combined height H2 as measured from the top-most surface of substrate 2. A screen printed structure, such as a conductive trace 74 screen printed in accordance with the present invention, extends from the left side of drawing FIG. 6 generally upwardly and toward the right, up and thus onto the top-most exposed surface of structure 70, exemplarily depicted as an insulative spacer. Conductive trace 74 further extends generally upwardly and toward the right so as to be disposed onto the top-most surface of structure 72, also exemplarily depicted as being an insulative spacer. As with drawing FIGS. 5 and 7, the preferred direction of squeegee travel is shown proceeding from left to right with the vertical distance H2 having a maximum dimension of at least approximately 10 mils (.010 inches/.025 cm). Thus, conductive trace 74 of drawing FIG. 6 has two uphill portions 76 and 78, thereby providing an example of a continuous, multi-level, screen

printed conductive trace or structure 74 disposed upon a substrate 2 and extending to the top-most surface of multi-level or stepped spacer 72 in accordance with the present invention.